

REMARKS

In view of the following remarks, reconsideration of the rejection is respectfully requested.

Claims 3-14 were rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the enablement requirement. Specifically, independent claims 3 and 13 were rejected for reciting a limitation inconsistent with an aspect of the invention disclosed in the specification. The Examiner states that the recitation "*said third fixed magnet portion has a pole opposite to that of said first and second fixed magnet portions directed toward the center of said ball portion*" of claims 3 and 13 is inconsistent with the description on page 18 of the application. This rejection is respectfully traversed and is believed clearly inapplicable to claims 3-14 in view of the following explanation.

The Examiner submits, on page 3 of the Office Action, that since first fixed magnetic portions 31 and 33 have a pole which is the same as that of the both ends 28A and 28B of the bar member 28, a repulsion force is exerted between the bar member 28 and the first fixed magnetic portions 31 and 33, and thus the operation disclosed in the specification (see page 18, lines 6-10) cannot be accomplished with the arrangement recited in claims 3 and 13.

It is respectfully submitted that the Examiner's understanding of the invention, as described on pages 2-3 of the Office Action is, for the most part, correct. However, the Examiner's statement that "a repulsion force is exerted ..." is incorrect when taken in the context of entire paragraph [0040] on page 18 of the specification, since the first fixed magnetic portions 31 and 33 have a pole (i.e., N-pole) that is opposite as that of ends 28A and 28B (i.e., S-pole).

Paragraph [0040] refers to Fig. 7 and describes the operation and corresponding magnetic forces when the rotation angle of ball 21 is greater than about 45°, which is the mid-angle between bar members 26 and 28. Referring to Fig. 7, the rotation angle of the ball 21 described above is the angle measured between the Z-axis (see Z-axis label of Fig. 7) and bar 28. For example, the angle measured between bar 26 and bar 28 is 90°, thus, when the angle between the Z-axis and bar 28 is greater than 45° the angle between the Z-axis and bar 26 is less than 45°. Accordingly, as described in paragraph [0040], end 26A is closer to the third fixed magnet portion 35 than end 28B, end 28A is closer to first

fixed magnet portion 31 than end 26A, and end 26B is closer to first fixed magnet portion 33 than end 28B.

As acknowledged by the Examiner, the first fixed magnet portions 31 and 33 have an N-pole, and the third fixed magnet portion 35 has an S-pole (opposite magnetic polarity of first fixed magnet portions). Moreover, the third fixed magnetic portion 35 has a magnetic charge about twice the magnetic charge of the first fixed magnet portions (see paragraph [0035], lines 21-22).

Based on the configuration described above, when, as described in paragraph [0040], end 26A is closer to third fixed magnet portion 35 than end 28B the magnetic force of third fixed magnet portion 35, being twice that and opposite to the first fixed magnet portions, will cause end 26A to have a stronger N-pole than end 28B and overcome any other magnetic forces exuded upon end 28B. This arrangement of magnetic poles will result in end 26A being “pulled” towards third fixed magnet portion 35. Moreover, in this configuration, first fixed magnet portions 31 and 33 are closer to ends 28A and 28B, respectively, than ends 26A and 26B, respectively. Accordingly, ends 28A and 28B, by the force of first fixed magnet portions 31 and 33, will have an S-pole. This arrangement of magnetic poles will result in ends 28A and 28B being “pulled” toward first fixed magnet portions 31 and 33, respectively. Thus, because the pulling force on end 26A by third fixed magnet portion 35 and the pulling forces on ends 28A and 28B by first fixed magnet portions 31 and 33, respectively, will overcome any opposing magnetic forces, as described above, ball 21 will rotate into the position illustrated in Fig. 6 (i.e., end 26A is adjacent to third fixed magnet portion 35, and ends 28A and 28B are adjacent to first fixed magnet portions 31 and 33, respectively).

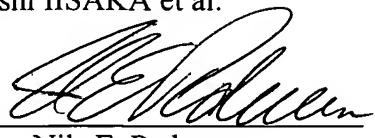
In view of the above explanation, it is respectfully submitted that the recitation “*said third fixed magnet portion has a pole opposite to that of said first and second fixed magnet portions directed toward the center of said ball portion*” does not render independent claims 3 and 13 inconsistent with the aspect of the invention disclosed in the specification.

In view of the above remarks, it is submitted that the present application is in condition for allowance and an early notification thereof is earnestly requested. The

Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

Atsushi IISAKA et al.

By: 

Nils E. Pedersen

Registration No. 33,145

Attorney for Applicants

NEP/ALD/nrj
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
March 22, 2007